

[ IN THE ABSTRACT: ]

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SUBSTITUTE ABSTRACT OF THE DISCLOSURE

20 A three-dimensional position and orientation sensing apparatus including: an image input section which inputs an image acquired by an image acquisition apparatus and showing at least three markers having color or geometric characteristics as one image, three-dimensional positional information of the markers with respect to an object to be measured being known in advance; a region extracting section which extracts a region corresponding to each marker in the image; a marker identifying section which identifies the individual markers based on the color or geometric characteristics of the markers in the extracted regions; and a position and orientation calculating section which calculates the three-dimensional position and orientation of the object to be measured with respect to the image acquisition apparatus, by using positions of the identified markers in the image input to the image input section, and the positional information of the markers with respect to the object to be measured.